

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027208**Date Inspected:** 16-Feb-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**13E PP118.2 E5 Vent Hole (Exterior)**

This QA Inspector observed QC Inspector Fred Von Hoff utilize a Bridge Cam Gage to measure the fit-up of the 20 mm plate in the B-U4a joint on vent hole 13E PP118.2 E5. This QA Inspector verified the fit-up as acceptable and employed a 66°C Tempilstik to ensure the minimum pre-heat temperature had been achieved. This QA Inspector randomly observed ABF welder Salvador Sandoval (welder ID 2202) performing the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position and observed the QC Inspector verify the welding parameters were in accordance with ABF-WPS-D1.5-1050A-CU. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appeared to be in general compliance with the contract specifications.

**QC NDT (Exterior)**

This QA Inspector randomly observed ABF Quality Control Inspector Mr. Harry Scharein performing Ultrasonic Testing (UT) inspection on "A" deck lifting lug holes #1-4 at 13E PP118.5 E4 on the exterior of the OBG. This QA Inspector observed that Mr. Scharein detected a rejectable ultrasonic indication on LLH #3 at y+0mm; 2mm's in length and 18mm's deep with an indication reading of +10db's. The deck at this location is

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20mm thick.

### QA NDT (Exterior)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of the welds at the locations listed below. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1. 5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

13E PP118.5 E4 Lifting Lug Holes #1, 2 and 4 (SPCM)

13E PP119.5 E4 Lifting Lug Holes #1-4 (SPCM)

### 13W PP119.5 W3 Lifting Lug Hole #4 (Exterior)

This QA Inspector randomly observed QC Inspector Sal Merino perform fit-up operations on lifting lug hole #4 at 13W PP119.5 W3. The QC Inspector utilized a Bridge Cam Gauge to measure the planar offset to be within + or - 1 mm from "A" deck and this QA Inspector verified the fit-up as acceptable and employed a 66°C Tempilstik to ensure the minimum pre-heat temperature had been achieved. This QA Inspector randomly observed ABF welder Mike Jimenez (welder ID 4671) performing the SMAW process in the (1G) flat position and observed the QC Inspector verify the welding parameters were in accordance with ABF-WPS-D15-1050A-CU. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general compliance with the approved WPS and the contract specifications.

### 12W/13W-W5-Longitudinal Stiffener #5 Repair (Interior)

This QA Inspector randomly observed ABF Rory Hogan perform SMAW utilizing E9018-MR electrodes in the 3G vertical position during repair welding operations on LS #5 in the interior of the OBG. This QA Inspector noted that Mr. Hogan employed a propane burner to pre-heat the joint to 200° F prior to welding. QC Inspector Sal Merino was observed measuring the parameters and monitoring the welding to ensure conformance with ABF-WPS-D1.5 1012-3 Repair. This QA Inspector noted that the work was in progress and the parameters and the workmanship appeared to be in general conformance with the contract documents.

### 13W PP122.5 W4 Lifting Lug Holes #3 and 4 (Interior)

This QA Inspector randomly observed ABF welders Rick Clayborn perform back-gouge operations on face "B" of lifting lug holes #3 and 4 on the interior of the OBG. This QA Inspector observed QC Inspector Sal Merino perform MT testing to ensure the soundness of the metal. It was noted that Mr. Merino found no rejectable indications. This QA Inspector randomly observed the welder perform SMAW in the (4G) overhead position with the QC Inspector monitoring the welding to insure the parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This Q Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general accordance with the contract documents.

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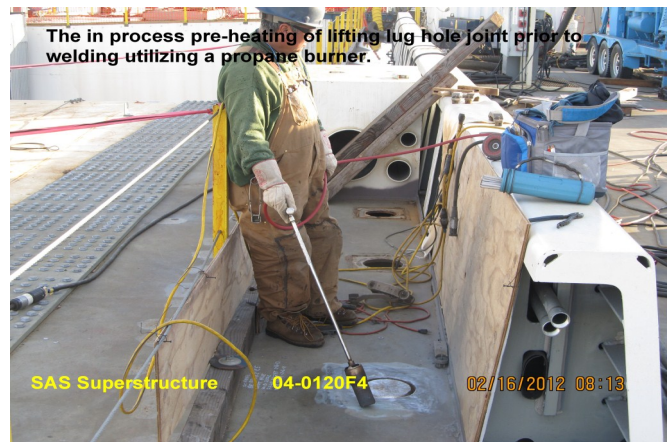
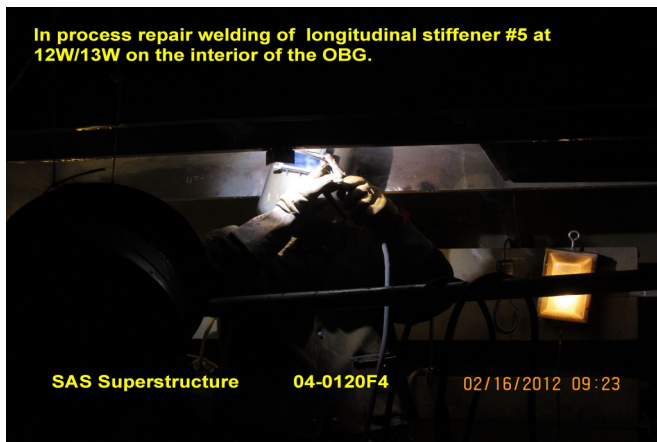
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13E/14E-A4 (Interior)

This QA Inspector randomly observed ABF welding operator James Zhen (ID 6001) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position on the underside of deck plate “A4”, at 13E/14E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=250/V=23.8/TS=190/HI=1.87). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general conformance to the contract requirements.

### Summary of Conversations:

The were no pertinent conversations to report.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Frey,Doug

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer